HL7 Interface Overview

The Health Level Seven (HL7) standard interface allows providers to continue to use their currently installed systems and for those systems to communicate with the Registry to access the patient vaccination history and recommended vaccines, then to update the Registry with additional immunizations and adverse reactions. This interface is the method of communication between PHClinic and the Kansas Immunization Registry (referred to as KSWebIZ). The following are the steps involved for connecting PHClinic to KSWebIZ through the interface. The boldfaced steps (1 & 2) will be used during this data cleansing cleanup process.

Data Cleansing:

1. **Health department will extract historical data from PHClinic for a data quality review and submit to KDHE via a secure website.**

2. **Data quality scripts will be run and a report will be generated by KDHE and then shared with each Health department. This document will identify what fields may contain values that are non-compliant with HL7 standards and may require data cleansing. Once this report is released, KDHE will review the results with the Health department to assist in configuring translation tables. The Health department is responsible in cleansing any data fields that will not be cleaned through the tables.**

3. Once all translation tables are configured in PHClinic and all data is cleansed, then a date will be establish to refresh the KSWebIZ training site and start testing message exchange.

Testing Connection:

4. Once the health department is pointed to the training site, a couple of test queries will be run along with some updates to verify connection. Once the connection is verified the health department will upload all immunization data to the Registry thru a batch file.

5. When the legacy data is imported to the KSWebIZ training site KDHE will review this data to verify data quality. If any errors are identified, KDHE will work with the health department and KIPHS in resolving the issues.

6. The health department will continue to use the interface process (to query and update in test environment) for several days so KDHE can observe messages and verify message exchange is accurate.

Go Live:

7. After testing is approved, KDHE will work with the health department to establish a go live date to the production site. Upon this date KDHE will send the new URL with password, etc. to KIPHS for connection to the production site.

8. Once pointed to the production site the health department will send a couple of test queries and updates to verify connection. Once verified, the health department will upload all immunization data to the Registry thru a batch file.

9. KDHE will continue to review data in production and verify the data quality. The health department will be responsible for maintaining the service and checking logs for errors.

Common Data Cleansing Issues

When the initial legacy data is extracted and sent to the KDHE Registry vendor for scripts to be run , KDHE will review the results with each health department. The health department is responsible for making corrections to the following data fields because they do not match format standards in the Registry. The first section requires manual intervention for individual patient records by the health department. The second section includes fields that can be cleansed through translation tables and KDHE will assist thru this process (See page 3).

<mark>**Section 1. Manual corrections needed to be cleansed by the Health Department.**</mark>

First name, last name, middle initial, or alias field:
These fields cannot contain parentheses, brackets, quotes, apostrophes, or any special characters to identify nicknames or alias. These fields should not be used to mark suffix, title, credentials or extra notes. For historical data, a period after the middle initial is acceptable.

Examples:
Smith "Duplicate do not use" = not acceptable
Mark "John" = not acceptable
Melissa (Missy) = not acceptable
John (Wrong B/Day) = not acceptable
Wilson**VOID** = not acceptable
Smith Jr., John = not acceptable
Duplicate = not acceptable
Old Bill!! = not acceptable
c/o Roger = not acceptable

Date of Birth:
Any DOB that appears to be generic will need to be corrected to prevent false data in the Registry.

Example:
01/01/1900 = not acceptable

Mother's Maiden Name:
This field should be the mother's maiden name only not first, middle, or last name (unless same as maiden name). Do not have the mother's maiden name and first name included together in this field.

Example:
Smith, Margaret = not acceptable

Suffix fields:
This field should **not** be used for middle name. Any title or credential should be in a separate field. Can only be the following values, anything else will need to be cleansed:
(Note: For historical data, a period after the suffix will be acceptable for this field.)

Jr	V	X	XV	XX
Sr	VI	XI	XVI	
II	VII	XII	XVII	

| III | VIII | XIII | XVIII |
| IV | IX | XIV | XIX |

Street Number (House/Bldg):

Most of the standard addresses will be okay, such as, 1000 SW Main Street. Non-conventional addresses, such as those listed below, will need to follow these standards:

PO Boxes should be entered as PO BOX 3; P.O. Box 3; or PO BOX #3. It is okay to include the periods, but they must have both PO and BOX, otherwise BOX will be parsed incorrectly.

Rural Routes should be entered as R.R. #2, RR #2, or RR-2. Again, the periods do not matter but if there is a space between the R's then it will incorrectly parse so either the # symbol or – connecting the RR to the number is required.

If they do not have an address please put "NFA", without any spaces or "unknown" in the street name. (Be consistent on whichever you choose).

Here are some examples of how the address **should** be entered:

House/Bldg#	Primary Direction	Street Name	Secondary Direction	Address 2
1000	SW	Main St.	N	
		PO Box 3		
		P.O. Box 3		
		PO BOX #3		
		R.R. #2		
		RR #2		
		RR-2		
		RR-2, BOX 3		
		NFA		
		RR-2, PO BOX 3		
100-1/2		Main St.		
1111	SW	Main, Apt #3		
1111	SW	Main, Lot #3		
1111	SW	Main, Apt 3		
1111	SW	Main, Lot 3		
1253D	N	Main		
2343	N	31 Street		
		NFA		
				PO Box 3

Here are some of the field definitions:

House/Bldg#: This field should be numerical. If there are letters attached to the building number then it should be attached to the number with either no space or a "-". If a ½ is in the address attach the number with a dash (100-1/2).

Primary Direction: This should be a direction abbreviation, not a number.

Street Name: This can be a combination of many things. Generally, it should be the name of a street. If you are listing a PO BOX or Rural Route, please list as in any of the above examples. Periods can remain or be left out, but do not space between the PO or the RR. If there is not an address available please use NFA (with no spaces) or unknown. When a number is the name of the street, do not include the suffix attached (example 31st or 54th). You can include the street type in the street name field (Example: Street or Ave, etc.)

Secondary Direction: This should be a direction abbreviation not a number.

Address 2: This field should be a complete address (without parsing) if differentiating from address 1. **Likewise you should list this address as the mailing address (like PO Boxes) when possible and address 1 as the physical address.**

Zip Codes:
This field has to include 5 digit or 9 digit numbers, no letters or characters. Errors will occur with anything else. Hyphens will be accepted if placed correctly.

Examples:
665235 = not acceptable
55555-5555 = acceptable

Phone Numbers:
This field must contain 10 digits and no letters. It will accept hyphens and parentheses if placed properly.

Examples:
(MOM)555-5555 = not acceptable
(SIS)555-5555 = not acceptable
(cel)555-555 = not acceptable
(0.03)555-5555 = not acceptable
(913)555-5555 = acceptable
9135555555 = acceptable
913-555-5555 = acceptable

Section 2. Translation tables – KDHE will assist with this section.

Fields that will be sent through a translation table for KIPHS users include:

Client MOGE Status	Gender Code	Race Code
Ethnicity Code	Primary Language	County Codes
Procedure Codes	Manufacturers	HL7 CVX External Codes
Address Street Directions.		

Primary Street Direction:
Primary directions should be distinct and without spelling errors. If common abbreviations are used and they do not match the values below then they will be translated to one of the below values in the translation tables.

Value	Descriptions

N	North
NE	North-East
NW	North-West
S	South
SE	South-East
SW	South-West
E	East
W	West
Branch	Branch
Exten	Extension

MOGE Status:
These are the only accepted values for MOGE Status:

Value	Description
A	Active
I	Inactive
L	Inactive-Lost to follow-up (cannot contact)
M	Inactive-Moved or gone elsewhere (transferred)
P	Inactive-Permanently inactive (do not re-activate or add new entries to this record)
O	Other
U	Unknown

Gender:
The only values accepted for gender are below:

Value	Description
F	Female
M	Male
O	Other
U	Unknown

Race:
These are the only accepted values for race:

Value	Description
I	American Indian or Alaska Native
A	Asian
P	Native Hawaiian or Other Pacific Islander
B	Black or African-American
W	White
U	Unknowns

Ethnicity:
These are the only accepted values for ethnicity:

Value	Descriptions
H	Hispanic or Latino
NH	not Hispanic or Latino
U	Unknown

Primary Language

These are the only accepted values for primary language:

Value	Description
ASE	American Sign Language
Ar	Arabic
Hy	Armenian
Bn	Bengali
Km	Cambodian
CJD	Chamorro
YUH	Chinese, Cantonese
Zh	Chinese, Mandarin
Hr	Croatian
Cs	Czech
Nl	Dutch
En	English
Fa	Farsi (Persian)
Fr	French
De	German
el	Greek
hi	Hindi
BLU	Hmong
hu	Hungarian
ILO	Ilocano
id	Indonesian
it	Italian
ja	Japanese
ko	Korean
lo	Laotian
OTH	Other
pl	Polish
pt	Portuguese
ro	Romanian
ru	Russian
sm	Samoan
sr	Serbian
sk	Slovak
so	Somali
es	Spanish
tl	Tagalog
th	Thai
to	Tongan

uk	Ukranian
ur	Urdu
vi	Vietnamese
yi	Yiddish

Manufacturer Codes:

These are the only accepted values for manufacturer codes:

Value	Description
AB	Abbott Laboratories (includes Ross)
AD	Adams Laboratories, Inc.
ALP	Alpha Therapeutic Corporation
AVI	Aviron
BAH	Baxter Healthcare Corporation (Hyland, IIAG, NAV)
BAY	Bayer Corp (includes Miles and Cutter)
BPC	Berna Products (includes Swiss Serum and Berne)
CNJ	Cangene Corporation
DVC	Dynport Vaccine Company LLC
GEO	GeoVax Labs, Inc.
GRE	Greer Laboratories, Inc.
IUS	Immuno US, Inc.
KGC	Korea Green Cross Corporation
MBL	MA Public Health Biologic Laboratories
MED	MedImmune, Inc.
MIP	Bioport Corporation
MSD	Merck & Co, Inc.
NAB	NABI (formerly North American Biologicals, Inc.)
NOV	Novartis Pharmaceutical Corporation
NVX	Novavax, Inc.
NYB	New York Blood Center
ORT	Ortho-Clinical Diagnostics
OTC	OrganonTeknika Corporation
OTH	Other Manufacturer
PD	Parkedale Pharmaceuticals (formerly Parke-Davis)
PMC	Sanofi Pasteur (Formerly Aventis Pasteur)
SCL	Sclavo, Inc.
SKB	GlaxoSmithKline (formerly SmithKline Beecham)
SOL	Solvay Pharmaceuticals
TAL	Talecris Biotherapeutics (Includes Bayer)
UNK	Unknown Manufacturer
USA	US Army Medical Research and Material Command

VXG	VaxGen
WAL	Wyeth Pharmaceuticals
ZLB	ZLB Behring (Includes Aventis and Armour)

City Codes:

Spaces and misspelled names are the most common problems in cities. The list below is the accepted spelling of Kansas cities:

CITY NAME		
Abbyville	Galesburg	North Newton
Abilene	Galva	North Wichita
Ada	Garden City	Norton
Admire	Garden Plain	Nortonville
Agenda	Gardner	Norway
Agra	Garfield	Norwich
Alamota	Garland	Oakhill
Albert	Garnett	Oaklawn
Alden	Gas	Oakley
Alexander	Gaylord	Oatville
Allen	Gem	Oberlin
Alma	Geneseo	Odin
Almena	Geuda Springs	Offerle
Alta Vista	Girard	Ogallah
Altamont	Glade	Ogden
Alton	Glasco	Oketo
Altoona	Glen Elder	Olathe
Americus	Goddard	Olmitz
Ames	Goessel	Olpe
Andale	Goff	Olsburg
Andover	Goodland	Onaga
Angola	Gorham	Oneida
Antelope	Gove	Opolis
Anthony	Grainfield	Osage City
Antonino	Grandview Plaza	Osawatomie
Arcadia	Grantville	Osborne
Argonia	Great Bend	Oskaloosa
Arkansas City	Greeley	Oswego
Arlington	Green	Otis
Arma	Greenbush	Ottawa
Arnold	Greenleaf	Overbrook
Ashland	Greensburg	Overland
Ashton	Greenwich	Overland Park
Assaria	Grenola	Oxford
Atchison	Gridley	Ozawkie
Athol	Grinnell	Palco
Atlanta	Gross	Palmer
Attica	Guilford	Paola
Atwood	Gypsum	Paradise
Auburn	Haddam	Park
Augusta	Hallowell	Park City
Aurora	Halstead	Parker

CITY NAME		
Austin	Hamilton	Parkerville
Axtell	Hanover	Parsons
Badger	Hanston	Partridge
Baileyville	Harding	Pauline
Baldwin City	Hardtner	Pawnee Rock
Barber	Harlan	Paxico
Barnard	Harper	Peabody
Barnes	Hartford	Peck
Barnesville	Harveyville	Penalosa
Bartlett	Havana	Penokee
Basehor	Haven	Perry
Bassett	Havensville	Peru
Bavaria	Haviland	Petrolia
Baxter Springs	Hays	Pfeifer
Bazine	Haysville	Phillipsburg
Beattie	Hazelton	Piedmont
Beaumont	Healy	Pierceville
Beeler	Heizer	Piqua
Bel Aire	Hepler	Pittsburg
Bellaire	Herington	Plains
Belle Plaine	Herndon	Plainville
Belleville	Hesston	Planeview
Belmont	Hewins	Pleasanton
Beloit	Hiattville	Plevna
Belpre	Hiawatha	Pomona
Belvidere	Highland	Porterville
Belvue	Hilford	Portis
Bendena	Hill City	Potter
Benedict	Hillsboro	Potwin
Bennington	Hillsdale	Powhattan
Bentley	Hoisington	Prairie View
Benton	Holcomb	Prairie Village
Bern	Hollenberg	Pratt
Berryton	Holton	Prescott
Beulah	Holyrood	Preston
Beverly	Home	Pretty Prairie
Big Bow	Hope	Princeton
Big Elk	Horton	Protection
Bird City	Howard	Quaker
Bison	Hoxie	Quenemo
Blaine	Hoyt	Quinter
Bloom	Hudson	Quivira
Blue Mound	Hugoton	Radium
Blue Rapids	Humboldt	Radley
Bluff City	Hunnewell	Rago
Bogue	Hunter	Ramona
Bonner Springs	Huron	Randall
Brazilton	Hutchinson	Randolph
Bremen	Independence	Ransom
Brewster	Industry	Rantoul
Bronson	Ingalls	Raymond
Brookville	Inman	Reading
Brownell	Iola	Redfield

CITY NAME		
Bucklin	Ionia	Reece
Bucyrus	Isabel	Republic
Buffalo	Iuka	Reserve
Buffville	Jamestown	Rexford
Buhler	Jennings	Rice
Bunker Hill	Jetmore	Richfield
Burden	Jewell	Richmond
Burdett	Johnson	Riley
Burdick	Junction City	Ringo
Burlingame	Kalvesta	Riverdale
Burlington	Kanopolis	Riverton
Burns	Kanorado	Robinson
Burr Oak	Kansas City	Rock
Burrton	Kechi	Roeland Park
Bushong	Kelly	Rolla
Bushton	Kendall	Roper
Buxton	Kensington	Rosalia
Byers	Kincaid	Rose
Caldwell	Kingman	Rose Hill
Cambridge	Kingsdown	Rosedale
Caney	Kinsley	Rosehill
Canton	Kiowa	Roseland
Capaldo	Kirwin	Rossville
Carbondale	Kismet	Roxbury
Carlton	La Crosse	Rozel
Carlyle	La Harpe	Rush Center
Carmean	Labette	Russell
Carona	LaCygne	Russell Springs
Cassoday	Lacygne	Sabetha
Catharine	Lafontaine	Saint Francis
Cato	Lake City	Saint George
Cawker City	Lake of the Forest	Saint John
Cedar	Lake Quivira	Saint Marys
Cedar Point	Lakin	Saint Paul
Cedar Vale	Lamont	Salina
Centerville	Lancaster	Satanta
Centralia	Lane	Savonburg
Centropolis	Langdon	Sawyer
Chanute	Lansing	Scammon
Chapman	Larned	Scandia
Chase	Latham	Schoenchen
Chautauqua	Lawrence	Schulte
Cheney	Lawton	Scott City
Cherokee	Le Roy	Scottsville
Cherryvale	Leavenworth	Scranton
Chetopa	Leawood	Sedan
Cimarron	Lebanon	Sedgwick
Circleville	Lebo	Selden
Claflin	Lecompton	Selkirk
Clay Center	Lehigh	Seneca
Clayton	Lenexa	Severance
Clearview City	Lenora	Severy

CITY NAME		
Clearwater	Leon	Seward
Clements	Leona	Sharon
Clifton	Leonardville	Sharon Springs
Climax	Leoti	Shawnee
Clyde	Levant	Shawnee Mission
Coalvale	Lewis	Sherwin
Coats	Liberal	Shields
Cockerill	Liberty	Sieboldt
Codell	Liebenthal	Silver Lake
Coffeyville	Lillis	Silverdale
Colby	Lincoln	Simpson
Coldwater	Lincolnville	Sims
Collyer	Lindsborg	Skidmore
Colony	Linn	Smith Center
Columbus	Linn Valley	Smolan
Colwich	Linwood	Soldier
Comotara	Little River	Solomon
Concordia	Logan	South Haven
Conway	Long Island	South Hutchinson
Conway Springs	Longford	Spearville
Coolidge	Longton	Spivey
Copeland	Loring	Spring Grove
Corbin	Lorraine	Spring Hill
Corning	Lost Springs	Stafford
Corwin	Louisburg	Stanley
Cottonwood Falls	Louisville	Stark
Council Grove	Lowell	Sterling
Countryside	Lucas	Stilwell
Courtland	Ludell	Stippville
Coyville	Luray	Stockton
Crestline	Lyndon	Strauss
Croweburg	Lyons	Strong City
Cuba	Macksville	Studley
Cullison	Madison	Stuttgart
Culver	Mahaska	Sublette
Cummings	Maize	Summerfield
Cunningham	Manchester	Sun City
Curranville	Manhattan	Susank
Damar	Mankato	Sycamore
Danville	Manter	Sylvan Grove
De Soto	Mantey	Sylvia
Dearing	Maple City	Syracuse
Deerfield	Maple Hill	Talmage
Delavan	Mapleton	Tampa
Delia	Marienthal	Tecumseh
Delphos	Marion	Tescott
Denison	Marquette	Thayer
Dennis	Marysville	Timken
Densmore	Matfield	Tipton

CITY NAME		
	Green	
Denton	Mayetta	Tonganoxie
Derby	Mayfield	Topeka
Devon	Mc Connell Air Force Base	Toronto
Dexter	Mc Cune	Towanda
Dighton	Mc Donald	Treece
Dillons	Mc Farland	Tribune
Dodge City	Mc Pherson	Trousdale
Dorrance	McConnell Air Force Base	Troy
Douglass	McCracken	Turon
Dover	McCune	Tyro
Downs	McDonald	Udall
Dresden	McFarland	Ulysses
Drywood	McLouth	Uniontown
Duluth	McPherson	Utica
Dundee	Meade	Valley Center
Dunlap	Medicine Lodge	Valley Falls
Duquoin	Medora	Vassar
Durand	Melrose	Vermillion
Durham	Melvern	Vernon
Dwight	Menlo	Victoria
Earlton	Mentor	Viola
Eastborough	Meriden	Virgil
Easton	Merriam	Vliets
Edgerton	Milan	Wakarusa
Edison	Milford	WaKeeney
Edmond	Milton	Wakefield
Edna	Miltonvale	Waldo
Edson	Mineral	Waldron
Edwardsville	Minneapolis	Walker
Effingham	Minneola	Wallace
El Dorado	Mission	Walnut
Elbing	Mission Hills	Walton
Elk City	Mission Woods	Wamego
Elk Falls	Modoc	Washington
Elkhart	Moline	Waterville
Ellinwood	Monmouth	Wathena
Ellis	Montezuma	Waverly
Ellsworth	Monument	Webber
Elmdale	Moran	Weir
Elsmore	Morehead	Welda
Elwood	Morganville	Wellington
Emmett	Morland	Wells
Emporia	Morrill	Wellsville
Englewood	Morrowville	Weskan
Ensign	Moscow	West Mineral
Enterprise	Mound City	Westfall
Erie	Mound Valley	Westmoreland
Esbon	Moundridge	Westphalia
Eskridge	Mount Hope	Westwood
Eudora	Mulberry	Westwood

CITY NAME		
		Hills
Eureka	Mullinville	Wetmore
Everest	Mulvane	Wheaton
Fairview	Munden	Wheeler
Fairway	Murdock	White City
Fall River	Muscotah	White Cloud
Falun	Narka	Whitewater
Farlington	Nashville	Whiting
Fellsburg	Natoma	Wichita
Florence	Navarre	Williamsburg
Fontana	Neal	Willis
Ford	Nekoma	Wilmore
Formoso	Neodesha	Wilsey
Fort Dodge	Neosho Falls	Wilson
Fort Leavenworth	Neosho Rapids	Winchester
Fort Riley	Ness City	Windom
Fort Scott	Netawaka	Winfield
Fostoria	Neutral	Winona
Fowler	New Albany	Woodbine
Frankfort	New Almelo	Woodston
Franklin	New Cambria	Wright
Fredonia	New Century	Xenia
Freeport	New Salem	Yates Center
Friend	New Strawn	Yoder
Frontenac	Newton	Zenda
Fulton	Nickerson	Zimmerdale
Galatia	Niotaze	Zurich
Galena	Norcatur	

CPT Codes:
Refer to http://www.cdc.gov/vaccines/programs/iis/stds/cpt.htm for proper CPT codes accepted.
All CPT codes must be setup in the providers system in order to accept all incoming CPT codes
(even if you don't use that vaccine locally).